# **EXHIBIT F**

# Mueller, Gregory

Volume 1 - 08/21/2019

# Summary Proceeding with Highlighted Clips Printed 05/23/2021 09:00AM CDT

## CONFIDENTIAL

P counter-counters
(Runtime - 00h:02m:58s)

Defense Counters
(Runtime - 00h:26m:01s)

Plaintiffs Designation
(Runtime - 00h:04m:08s)

Plaintiffs Objections
(Runtime - 00h:06m:54s)

### Page 00008

02:	THE VIDEOGRAPHER: We're on the
03:	record. Today's date is August 21st, 2019.
04:	The time is now 1:46 p.m.
05:	This is the deposition of Greg
06:	Mueller in regards to the Pacific Fertility
07:	Center Litigation. We are located at
08:	1330 Jersey Avenue South, Minneapolis,
09:	Minnesota.
Plaintiffs Obj	ections 402 relevance; 403 waste of time:
Plaintiffs Obj	ections 402 relevance; 403 waste of time:  The videographer's name is
10:	The videographer's name is
10:	The videographer's name is  David Jenkins appearing on behalf of
10: 11: 12:	The videographer's name is  David Jenkins appearing on behalf of  Depo International. The court reporter's
10: 11: 12: 13:	The videographer's name is  David Jenkins appearing on behalf of  Depo International. The court reporter's  name is Amy Larson, also appearing on behalf
10: 11: 12: 13:	The videographer's name is  David Jenkins appearing on behalf of  Depo International. The court reporter's  name is Amy Larson, also appearing on behalf  of Depo International.

# Page 00010

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	Plaintiffs	Obj	ections 402 relevance; 403 waste of time:
	05:	Q.	And so just a couple of quick things to
	06:		start, Mr. Mueller. The first is, can I
	07:		well, have you had a deposition taken before?
	08:	Α.	No.
	09:	Q.	Okay. This is your first deposition
	10:		experience?
	11:	Α.	Yes.

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13:		Do you understand that you are here
14:		today speaking on behalf of Extron, not
15:		necessarily yourself?
16:	Α.	Yes.

# $Mueller,~Gregory~-~Volume~1~-~08/21/2019^{6}~~\text{Filed 05/23/21}~~\text{Page 4 of 26}$

17:	Q. Okay. Do you currently work at Extron?
18:	A. Yes.
19:	Q. Okay. What is your position there?
20:	A. I am a design engineer.
21:	Q. Okay. How long have you worked at Extron?
22:	A. I've worked at Extron since 2007.
23:	Q. Okay. And have you been a design design
24:	engineer at Extron since then?
25:	A. No.

#### (continued page 00012)

(Continued	pag	e 00012)
0012		
01:	Q.	Where what did you start doing at Extron?
02:	Α.	I started as a part-time intern helping in
03:		the engineering department.
04:	Q.	Okay.
05:	A.	And then, I suppose, my position is more
06:		described as an engineering technician,
07:		before eventually becoming more peer
08:		engineer.
09:	Q.	Great. When did you assume the role of
10:		design engineer?
11:	Α.	That's the title more recently, I'd say, in
12:		the last year they've been referring to me
13:		as. Before that, my business card said
14:		electronics engineer and that was probably
15:		started around, I'd say, 2012.
16:	Q.	Okay. Very good.

# Plaintiffs Objections 402 relevance; 403 waste of time: 17: And working as an engineer at 18: Extron, have you done that in a particular 19: division or is that sort of more generally? 20: A. I don't understand.

# $Mueller,\ Gregory\ \ \ ^{Case\ 3:18-cv-01586-JSC}\ \ \ ^{Document\ 814.6}\ \ \ ^{Filed\ 05/23/21}\ \ \ ^{Page\ 5\ of\ 26}$

21:	Q. Sure. Let me let me ask it differently.
22:	Are there different divisions that
23:	engineers are in at Extron? For instance,
24:	you work on a certain product line and
25:	somebody else works and a different

#### (continued page 00013)

(continued pag	ge 00013)
0013	
01:	engineer works on a different product line?
02: A.	It works out that way, that different
03:	engineers work on different product lines,
04:	but there's nothing official, and we at times
05:	cross and work on other projects that we
06:	don't normally work on.
07: Q.	Okay. From your time at Extron, what product
08:	lines have you worked on?
09: A.	I've worked on a whole lot, so product lines
10:	for customers like Chart, Schneider. I've
11:	worked with our sort of our Legacy
12:	products we've referred to, which are our
13:	line of DC motor drives, and there's
14:	certainly been other custom products for
15:	other customers. I don't know that I can
16:	recall every single one off the top of my
17:	head.
18: Q.	That's fine.
19:	Was this a particular product or
20:	products you worked on for Chart?
21: A.	For Chart, I worked on their TEC 3000 units,
22:	TEC 2000C, Vario PRO, and most recently the
23:	MVE TS.

23:	Q. Okay. Chart still makes the TEC 3000 or
24:	excuse me, Extron still makes the Chart
25:	TEC 3000, right?

(contin	ued pag	e 00017)
0017		
01:	Α.	Yes.
02:	Q.	Okay. The do you know how many TEC 3000s
03:		Extron has made?
04:	Α.	I don't know specifically. I believe I've
05:		heard around 20,000.
06:	Q.	
	Q.	
07:		you know if that number is all four of these
08:		models of controller or is that just the
09:		TEC 3000?
10:	A.	I don't know. The context I heard led me to
11:		believe it was just the TEC 3000.
12:	Q.	Okay. Fair enough.
D1-1-4-1		
Plainti.	ffs Obj	ections 402 relevance; 403 waste of time:
PIAINCI. 13:	ffs Obj	ections 402 relevance; 403 waste of time: We're going to talk primarily here
	ffs Obj	
13:	ffs Obj	We're going to talk primarily here
13:	ffs Obj	We're going to talk primarily here about the design of the TEC 3000, both sort
13: 14: 15:	ffs Obj	We're going to talk primarily here about the design of the TEC 3000, both sort of, like, the process for the design and also
13: 14: 15: 16:	ffs Obj	We're going to talk primarily here about the design of the TEC 3000, both sort of, like, the process for the design and also the design itself, as well as any issues and
13: 14: 15: 16:	ffs Obj	We're going to talk primarily here  about the design of the TEC 3000, both sort  of, like, the process for the design and also  the design itself, as well as any issues and  potential fixes that have arisen with it,
13: 14: 15: 16: 17:		We're going to talk primarily here  about the design of the TEC 3000, both sort  of, like, the process for the design and also  the design itself, as well as any issues and  potential fixes that have arisen with it,  okay?
13: 14: 15: 16: 17: 18: 19:	A. Q.	We're going to talk primarily here  about the design of the TEC 3000, both sort  of, like, the process for the design and also  the design itself, as well as any issues and  potential fixes that have arisen with it,  okay?  Okay.  Did the TEC 3000 have a predecessor model?
13: 14: 15: 16: 17: 18: 19: 20: 21:	Α.	We're going to talk primarily here about the design of the TEC 3000, both sort of, like, the process for the design and also the design itself, as well as any issues and potential fixes that have arisen with it, okay? Okay.  Did the TEC 3000 have a predecessor model? Yes. Not designed by Extron. There's a
13: 14: 15: 16: 17: 18: 19: 20: 21:	A. Q.	about the design of the TEC 3000, both sort  of, like, the process for the design and also  the design itself, as well as any issues and  potential fixes that have arisen with it,  okay?  Okay.  Did the TEC 3000 have a predecessor model?  Yes. Not designed by Extron. There's a  previous TEC 2000 unit. It was that the
13: 14: 15: 16: 17: 18: 19: 20: 21:	A. Q.	We're going to talk primarily here about the design of the TEC 3000, both sort of, like, the process for the design and also the design itself, as well as any issues and potential fixes that have arisen with it, okay? Okay.  Did the TEC 3000 have a predecessor model? Yes. Not designed by Extron. There's a
13: 14: 15: 16: 17: 18: 19: 20: 21:	A. Q.	We're going to talk primarily here about the design of the TEC 3000, both sort of, like, the process for the design and also the design itself, as well as any issues and potential fixes that have arisen with it, okay? Okay.  Did the TEC 3000 have a predecessor model? Yes. Not designed by Extron. There's a previous TEC 2000 unit. It was that the design was based on.

### (continued page 00018)

0018	
01:	TEC 2000?
02:	A. The main differences I know of is TEC 3000
03:	has a four-line LCD display; the TEC 2000 had
04:	a two-line LCD display.
05:	I believe the connections were
06:	configured in a different manner, but mostly
07:	had the same functionality.
08:	And I believe the TEC 3000 had more
09:	memory for storing events.

#### Page 00019

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09:	Q.	Okay. Is there a user manual specifically
10:		for the TEC 3000?
11:	Α.	Yes.
12:	Q.	Okay. Did who drafted that user manual?
13:	Α.	I know the user manual is kept and updated by
14:		Chart. I'm not sure on the original origins
15:		of it.
16:	Q.	Okay. Let me let me just ask a couple of
17:		clarifying questions to see if

Page 00020	
02:	Q. So the user manual for the TEC 3000, is that
03:	a standalone user manual just for the
04:	TEC 3000 or is it embedded in a broader user
05:	manual?
06:	A. It was just a standalone for the TEC 3000.
Plaintiffs O	bjections 602 speculation:
07:	Q. Okay. Do you know if Extron had any say
08:	in strike that.
09:	Do you know if Extron played any
10:	role in the drafting of that user manual?

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11:	A.	I know they provided information that was
12:		used in the manual. I'm not sure if any
13:		Extron employees worked on the document.
14:	Q.	How do you know that Extron provided details
15:		for that manual?
16:	Α.	I guess that's a bit of an assumption based
17:		on the type of data would have come from us.
18:	Q.	Okay.
19:	Α.	That Chart wouldn't have known without
20:		Extron's input.
Plaintiffs	Ohi	
		ections 402 relevance; 403 waste of time:
21:		ections 402 relevance; 403 waste of time: Okay. And so it's probably a fair point to
21:		Okay. And so it's probably a fair point to
21:		Okay. And so it's probably a fair point to pause for a second and just say if you're

# (continued page 00021)

01: Does that make sense?	
02: A. Yes.	
Plaintiffs Objections 602 speculation; 402 relevance:	
03: Q. Okay. And so what type of information is in	
04: the TEC 3000 user manual that you assume came	
05: from Extron?	
06: A. Let's see, so there's descriptions of how	
07: to or of the communications protocol, for	
08: example, that would have been very precise on	
09: various commands that could be sent to or	
10: from the unit. So Extron would have provided	
11: those specifics to make sure the commands	
12: were relayed correctly.	
13: Q. And if it was doing if Extron was doing	
14: that for a user manual, do you know if sort	

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15:	of the questions for the type of information
16:	needed in that user manual would have come
17:	from Chart or would have Extron just provided
18:	that affirmatively?
19: A.	I don't know.

### Page 00021

21:	I want to talk about do you know
22:	what an FMEA is?
23:	A. Yes.
24:	Q. Okay. What is it?
25:	A. I believe it stands for failure mode effects

# (continued page 00022)

0022		o
01:		analysis.
02:	Q.	Okay. Was an FMEA performed on the TEC 3000?
03:	Α.	Yes.
04:	Q.	Who performed it?
05:	Α.	It was performed by Extron, including myself
06:		and my boss at the time, Carson Ripple, along
07:		with several Chart employees.
08:	Q.	Where did it occur?
09:	Α.	It occurred at Chart's facility in Ball
10:		Ground, Georgia.
11:	Q.	When did it occur?
12:	Α.	I believe it was in 2011.
13:	Q.	Okay. Why was an FMEA for the TEC 3000
14:		performed in 2011?
15:	Α.	I don't know.
16:	Q.	Do you know if that would have been something
17:		that Chart requested was done or that Extron
18:		wanted to do?
19:	Α.	My assumption would be that Chart requested

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20:	it, as we typically wouldn't just do that
21:	type of work without the customer's input or
22:	request.
23:	Q. Okay. And was do you know what a DFMECA
24:	is?
25:	A. DFMCA

### (continued page 00023)

(continued	pag	e 00023)
0023		
01:	Q.	MECA.
02:	Α.	MECA? No, not exactly.
03:	Q.	Okay. Do you know what a DFMA is DFMEA
04:		is?
05:	Α.	Yes.
06:	Q.	What is that?
07:	Α.	Design mode failure effects analysis, I
08:		believe is what it stands for.
09:	Q.	Was a DFMEA ever conducted for the TEC 3000?
10:	A.	Yes. Now I'm thinking I might have been
11:		confusing FMEA and DFMEA because I believe we
12:		called our process an DFMEA and not just an
13:		FMEA.
14:	Q.	Okay. Just so the record is clear on this,
15:		when you were talking about an FMEA occurring
16:		in I think you said 2011, you meant a
17:		DFMEA?
18:	Α.	Yes.
19:	Q.	Okay. Why why was an FMEA or a DFMEA not
20:		performed on a TEC 3000 before it went out
21:		into the field?
22:	Α.	I don't know.
23:	Q.	Is that kind of have have you performed

# Mueller,~Gregory~-~Volume~I~-~08/2~I/20~I9~ Filed 05/23/21 Page 11 of 26

24:	FMEAs or DFMEAs on products before they're
25:	put out into the field?

### (continued page 00024)

0024	Pug	C 00021)
01:	7\	No.
01:	Α.	No.
02:	Q.	Okay. When you perform FMEAs or DFMEAs, is
03:		that an at Extron, is that done pursuant
04:		to a request from your customer or because
05:		Extron wants to do it?
06:	A.	The only formal DFMEA I took part in was with
07:		Chart, and I believe that was a request
08:		involving Chart. We certainly would perform
09:		that work at the request of another customer
10:		as well.
11:	Q.	Okay. And I may have asked this, my
12:		apologies if I did. Do you know why Chart
13:		requested that the DFMEA occur?
14:	Α.	No.
15:	Q.	Who at Extron would know that?
16:	Α.	Presumably, I was informed about it by my
17:		boss at the time, Carson Ripple, so I would
18:		think I would assume he would know more
19:		info.
20:	Q.	Did Extron perform any prerelease testing of
21:		the TEC 3000?
22:	Α.	I wasn't around at the time of prerelease,
23:		but as far as I understand from records and
24:		things, yes.
25:	Q.	What kind of testing?

### (continued page 00025)

# Mueller,~Gregory~-~Volume~I~-~08/2~I/20~I9~ Filed 05/23/21 Page 12 of 26

01:	Α.	So again, I don't know the specifics, but
02:		in general for a product like that we would
03:		test each feature as designed to ensure it's
04:		working the way we intend it to.
05:	Q.	So I I understand from your answer
06:		that's might be typically what is done at
07:		Extron.
08:	Α.	Uh-huh.
09:	Q.	Do you have any knowledge of that having been
10:		done with regard to the TEC 3000?
11:	Α.	I have no specific knowledge of that.
Plaintiffs	Obje	ections 402 relevance:
12:	Q.	Do you know what a daily tree analysis is?
13:	Α.	Can you repeat that, please?
13:	A. Q.	
		Can you repeat that, please?
14:	Q.	Can you repeat that, please?  Do you know what a daily tree analysis is?
14: 15:	Q. A.	Can you repeat that, please?  Do you know what a daily tree analysis is?  No.
14: 15: 16:	Q. A. Q.	Can you repeat that, please?  Do you know what a daily tree analysis is?  No.  Do you know what a DFMECA is?
14: 15: 16: 17:	Q. A. Q. A.	Can you repeat that, please?  Do you know what a daily tree analysis is?  No.  Do you know what a DFMECA is?  No.

Plaintiffs	Obj	ections 402 relevance; 403 waste of time:
08:	Q.	Are there multiple versions of the TEC 3000?
09:	Α.	Yes.
10:	Q.	How many?
11:	A.	I don't know the exact number. I believe
12:		it's around six.
13:	Q.	Okay. And how were how is each one
14:		different from the other?
15:	Α.	So there's some differences. The two I
16:		guess the three main model differences,

# Mueller,~Gregory~-Volume~I~-~08/2~I/20~I9~ Filed 05/23/21 Page 13 of 26

17:	there's a text version, which just refers to
18:	text on the buttons on the front plate so
19:	they're labeled with their function text.
20:	There's a symbolic version, which
21:	the only difference is the front plate
22:	buttons are labeled symbols instead of text.
23:	Then there is a cabinet version,
24:	which is the same internal parts
25:	functionality but has different packaging so

### (continued page 00027)

(continued pag	ge 00027)
0027	
01:	the display and the control board are mounted
02:	away from each other instead of in the same
03:	enclosure, and I believe that can be either
04:	symbolic or text version of that.
05:	And then the other differences,
06:	there's some other versions that have
07:	specific branding, graphics on the faceplate.
08:	So instead of having the Chart logo, it has
09:	the logo of I don't recall the exact
10:	logos, but some other logo that Chart
11:	requested.
12: Q.	Is it fair to say that the differences among
13:	those six types of TEC 3000s are cosmetic?
14: A.	Yes.
15: Q.	Okay. They have the same internal parts,
16:	correct?
17: A.	
18: Q.	And they have the same functionality?
19: A.	Yes.
20: Q.	Okay. Okay. When was the TEC 3000 designed?

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21:	A. I believe the the design of the TEC 3000
22:	started in 2005.
23:	Q. Okay. And has the design of the TEC 3000
24:	changed in any way since its initial launch?
25:	A. There have been some incremental changes to

# (continued page 00028)

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	0028		
	01:		the firmware and some incremental changes to
	02:		the hardware. The overall functionality has
	03:		remained consistent.
	04:	Q.	Okay. What changes to the hardware have
	05:		there been?
	06:	Α.	There was certainly a few changes, I don't
	07:		remember each one specifically, where maybe a
	08:		an internal part was no longer available from
	09:		a supplier so an equivalent part was found,
	10:		tested, and replaced.
	11:		And what else to the hardware? Oh,
	12:		the style of buttons on the faceplate control
	13:		were changed from a membrane style to a push
	14:		button.
	15:		That's all the specifics I can
	16:		recall.
	17:	Q.	Okay. Fair to say that there have been no
	18:		major changes to the hardware to the TEC 3000
	19:		since its launch?
	20:	Α.	Yes.

24:	Q. And what changes to the firmware have there
25:	been?

### (continued page 00029)

01: A.	I don't recall specifics, but there were
02:	certainly, you know, mostly some small
03:	changes in the way, you know, specific how
04:	the screen displayed information, clarifying
05:	language.
06:	There were changes over time in how
07:	warnings, alarms were displayed and
08:	additional ones added, I believe.
Plaintiffs Ob	jections 403 confusing/misleading (function not present
	at issue in this case); 402 relevance:
09:	There were I'm just trying to
10:	think of another specific one I can recall
10:	think of another specific one I can recall was a change in the autofill function so that
11:	was a change in the autofill function so that
11:	was a change in the autofill function so that  it no longer filled when the unit thought
11: 12: 13:	was a change in the autofill function so that  it no longer filled when the unit thought  there was a level of zero, it required user

19:

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08:	Q. Okay. And let me say it differently. This
09:	would have been a better way to ask that.
10:	The firmware change of how the
11:	screen displays information, was that a
12:	change that Chart requested?
13:	A. Yes.
14:	Q. The firmware change regarding how warnings or
15:	alarms are displayed, was that a change that
16:	Chart requested?
17:	A. Yes.
Plaintiffs (	Objections 403 confusing/misleading (function not present
	er at issue in this case); 402 relevance:
18:	Q. The firmware change with regard to the

autofill function, was that a change that

20:		Chart requested?
21:	Α.	Yes.
22:	Q.	Are those firmware changes that were made,
23:		could those have been pushed out to the
24:		machines that were still in the field?
25:	Α.	Yes.

# (continued page 00031)

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0031	
01:	Q. And were they, in fact, pushed out to the
02:	machines in the field?

#### Page 00031

05:	THE WITNESS: I don't know if they
06:	were pushed out to all of them. I'm aware of
07:	certainly certain cases where they were.

10:	Q.	And in those cases that you're aware of, who
11:		was it well, let me put it this way: Was
12:		it Extron who pushed out those changes to the
13:		units in the field?
14:	Α.	No.
15:	Q.	Who was it?
16:	Α.	I guess I don't Extron provided the new
17:		firmware to Chart, and Chart had an
18:		application that they could send that
19:		application and the firmware to the customer,
20:		and also I think Chart would update them, you
21:		know, units they already had in their
22:		facility at times before sending them.
23:	Q.	Right. And so for firmware changes, while
24:		Extron may have made those changes so that
25:		the new firmware could be pushed out to the

# (continued page 00032)

0032	
01:	end users, it was ultimately up to Chart to
02:	determine if it was going to do so?
03: A.	It was up to Chart whether to release it or
04:	not. I'm not sure who decided whether a
05:	specific unit in the field got the update or
06:	not.
07: Q.	Okay. I appreciate that.
08:	And just so I'm clear in my own
09:	mind, Extron was not a party who actually
10:	pushed out any of the firmware changes to
11:	units in the field, correct?
12: A.	Correct.
13: Q.	If it was done, to the best of your
14:	understanding, that was done by Chart?
15: A.	Yes.
16: Q.	
17:	TEC 3000. That occurred before you
18:	personally, Mr. Mueller, before you joined
19:	Chart or Extron, correct?
20: A.	
21: Q.	Okay. But because you're speaking on behalf
22:	of Extron, I want to ask you some questions,
23:	and now when I'm saying, "You," I'm talking
24:	about Extron, okay?
25: A.	Okay.

- ugc	00055		
01:		Q.	Did Extron are there specifications for
02:			which the TEC 3 from which the TEC 3000
03:			was originally made?

04:	Α.	As far as the functionality of the TEC 2000,
05:		I know that was specification worked off of;
06:		other than that, I don't know.
07:	Q.	Let me put it this way: So Chart says we
08:		want to make a controller that does A, B, and
09:		C, correct?
10:	Α.	Correct.
11:	Q.	Okay. Extron doesn't decide what A, B, and C
12:		are, right?
13:	Α.	Correct.
14:	Q.	Okay. It's then Extron's job to figure out
15:		how to build a controller that will satisfy
16:		functions A, B, and C, correct?
17:	Α.	Yes.
18:	Q.	Okay. Does Chart tell Extron how to make
19:		that happen, or does Extron come up with the
20:		details of how to make the machine?
21:		MR. SMITH: Calls for speculation.
22:		THE WITNESS: So that would be
23:		Extron so Chart would provide the what
24:		they wanted to do, how they wanted to do it,
25:		possibly form factor, things like that.

# (continued page 00034)

0034	
01:	Extron would make the decisions
02:	internally how to make those designs come to
03:	reality.
04:	MR. WOLF: Okay.
05:	BY MR. WOLF:
06:	Q. And going forward, if there was a change to
07:	the design of the TEC 3000, Extron would do

08:	that only if Chart said if Chart gave the
09:	go ahead to do it, correct?
10: A.	Correct.

#### Page 00112

23:	Q. If the controller were reading the liquid
24:	level of zero, should that sound the alarm?
25:	A. In most cases, yes. I'm trying to think. I

### (continued page 00113)

(COIICIIIaca page	
0113	
01:	don't I don't recall off the top of my
02:	head if there's a way to set the alarm set
03:	point down to zero. I believe that's no I
04:	don't recall that for a hundred percent, but
05:	under normal circumstances, zero would be an
06:	alarm.
07: Q.	Okay. And if your customer and even though
08:	the liquid level is not zero but it's reading
09:	at zero, the controller is reading it as
10:	zero, and the alarm was going off, what is
11:	the customer left to do?

#### Page 00113

22:	Q. Technically. I mean, as a technical matter
23:	working with the controller, what are the
24:	customer's options?
25:	MR. HOLDER: Same objections.

#### (continued page 00114)

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	0114
01	: THE WITNESS: So in the case that
02	: it's reading zero, doesn't but they know it's
03	not zero, I suppose they could try to
0 4	: recalibrate the level on the unit.

05:	BY MR. WOLF:
06:	Q. Okay. And you can do that through the
07:	controller?
08:	A. Yes.
09:	Q. Okay. And when it was experiencing this
10:	problem with the static shock, were those
11:	subject to re could those be recalibrated
12:	at the facility?

### Page 00114

17:	THE WITNESS: I recall some cases
18:	where it was reported that a unit serial
19:	number zero, there's a recalibration
20:	attempted but it failed.
21:	MR. WOLF: Okay.
22:	BY MR. WOLF:
23:	Q. Are you aware of any time that the static
24:	shock issue happened, okay, and the end user
25:	was able to recalibrate it at the facility

# (continued page 00115)

0115	
01:	right then and there?
02:	A. I don't recall hearing about a unit like
03:	that.
04:	Q. Okay. And so if they couldn't recalibrate
05:	it, okay, what was the customer left to do?

08:	THE WITNESS: I would guess they
09:	would contact Chart for technical support.
10:	MR. WOLF: Okay.
11:	BY MR. WOLF:
12:	Q. But as a technical matter working with the

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13:	controller, what would the customer's options
14:	be?

### Page 00115

18:	THE WITNESS: The only thing I can
19:	guess they could do would be to manually
20:	monitor the unit for its level.
21:	BY MR. WOLF:
22:	Q. And turn off the alarm?
23:	MR. HOLDER: Is that a question?
24:	BY MR. WOLF:
25:	Q. Could they turn off the alarm, is my

#### (continued page 00116)

( )	ontinuea	pay	e 00110)
	0116		
01:			question.
02:		Α.	They could for sure mute it for a certain
03:			amount of time.
04:			Again, I don't recall if that if
05:			a low-level alarm, if there's a way to figure
06:			the settings such that it wouldn't show up
07:			again, but if they muted it, it would come
08:			back.
09:		Q.	How long after?
10:		A.	I believe it's after 30 minutes.
11:		Q.	Okay. I guess another option would be they
12:			can just unplug the controller, correct?
13:		A.	I would guess that's
14:			MR. HOLDER: Calls for
15:			speculation.
16:			THE WITNESS: someone could
17:			choose to unplug the controller any time they
18:			wanted to.

19:	BY MR. WOLF:
20:	Q. Okay. So I'm just trying to figure out if
21:	you're the end user here and this has
22:	happened, right, it seems like your realistic
23:	options are, you can press the mute button
24:	for the alarm, but then it's just going to
25:	come back every 30 minutes, right?

#### (continued page 00117)

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(	0117	
01:	A.	Uh-huh.
02:	Q.	Or you can unplug the controller, right?
03:		Are there any other options?
04:		MR. SMITH: Misstates testimony.
05:		THE WITNESS: Just listen to the
06:		alarm.

### Page 00127

Defense Objections See Objection to Trial Exhibit 284 (Doc. 783-1); inadmissible other occurrence evidence not previously ruled on; not substantially similar; FRE 403/802/803:

12: Q. Exhibit 20, starting with Bates stamp 290.

### Page 00127

Defense Object.	ions See Objection to Trial Exhibit 284 (Doc. 783-1);
inadmissible o	ther occurrence evidence not previously ruled on; not
substantially ;	similar; FRE 403/802/803:
18: Q.	This is just an offshoot of this e-mail
19:	thread, right? We've seen the bottom e-mail
20:	here from Brendon Wade about those two more
21:	TEC 3000s.
22: A.	It looks the same. I guess I didn't memorize
23:	serial numbers. It had the other one, but
24:	yeah.
25: Q.	And here, Ramon Gonzalez of Chart wrote to

#### (continued page 00128)

0128	
01:	you, right?

02:	A.	Yes.
03:	Q.	"We just lost a large" quality "quantity
04:		of freezer sales in Europe because of
05:		TEC 3000 issue."
06:		Do you remember receiving this?
07:	Α.	Specifically, no, but it seems familiar.
08:	Q.	Okay. What was the TEC 3000 issue?
09:	A.	I assume the issue he's talking about is the
10:		one that caused the serial number to drop to
11:		zero.
12:	Q.	Okay. And just to be clear, that's the one
13:		that Extron believed was due to static shock,
14:		correct?

#### Page 00128

1490 00110
17: THE WITNESS: Static shock was one
18: way we replicated that issue in our testing.
19: BY MR. WOLF:
Q. And, in fact, that's the only way it
21: replicated the issue in the testing, correct?
22: A. That we replicated that, yes.
Defense Objections See Objection to Trial Exhibit 284 (Doc. 783-1);
inadmissible other occurrence evidence not previously ruled on; not
substantially similar; FRE 403/802/803:

Q. Okay. Now, Chart hierarchy needs an answer
urgently why this is occurring. So needless

25: to say, this has turned into a high priority.

# (continued page 00129)

0129		
01:		Now, this was written in July of 2015, right?
02:	Α.	Yes.

5	
04:	of your controller Ramon said. I'm sorry,
05:	let me just ask this question again, strike
06:	that.
07:	Ramon from Chart says, "We need to

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08:		know results of your controller evaluation on
09:		the sudden level drop to zero and why the
10:		serial number disappears. Download will also
11:		show random," and then those numbers and it's
12:		log.
13:		Now, this is a different set of
14:		numbers, isn't it? This is 255, 255, 0000.
15:	Α.	Yes.
16:	Q.	That's different from what we saw before,
17:		wasn't it?
18:	Α.	One of them is, yes.
19:	Q.	Yup. That 0000 number is different, right?
20:	Α.	Yes.
21:	Q.	Okay. This seems to indicate that Extron had
22:		already conducted a controller evaluation, so
23:		I want to ask about that.
24:		At this point, in July of 2015, had
25:		Extron conducted a controller evaluation to

### (continued page 00130)

(Continued p	age 00130)
0130	
01:	figure out this issue of the drop in levels?
02:	A. I know our production team had certainly
03:	gotten controllers back with those issues,
04:	ran them through the testing.
05:	I don't recall if at this time
06:	anything beyond that had been done.
07:	Q. Okay. When did Extron start running tests
08:	regarding high-voltage transient events?
09:	A. As related to TEC 3000, Extron did that I
10:	believe there was some of that done of a
11:	different nature during the original
12:	development of it.

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13:	I'm trying to think. Oh, that was
14:	done by Extron. That was done by an external
15:	testing facility, sorry.
16:	So Extron, our first time I'm aware
17:	of, was in would have been around 2018
18:	that we did the no, that was with the
19:	ESD specifically. You asked about
20:	high-energy transients.
21:	I believe earlier in 2018, and I
22:	don't recall the year [sic], we did
23:	conduct tried to use a spark gap to induce
24:	noise near TEC 3000 to try and replicate the
25:	issue.

# (continued page 00131)

0131		
01:	Q.	And that was done sometime prior to 2018?
02:	Α.	Yes.
03:	Q.	Where was that done?
04:	Α.	That was done at Extron.
05:	Q.	Which facility?
06:	Α.	In our Plymouth facility.
07:	Q.	Is that in Minnesota?
08:	Α.	Yes.
09:	Q.	Okay. And that testing was done in response
10:		to the complaints received regarding the
11:		serial number and level issues, correct?
12:	Α.	I I don't recall. I remember the testing
13:		being done, and I don't believe we replicated
14:		whatever issue we were looking for at the
15:		time. I don't recall what exactly prompted
16:		it.

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22:	Q.	Do you believe that firmware issues were, in
23:		fact, contributing to the static shock issue?
24:	Α.	I believe it was the firmware that created
25:		some of the specific symptoms the way the

### (continued page 00178)

(continued page 00178)		
0178		
01:	firmware reacted to the static event.	
02: Q	. But it wasn't my understanding that	
03:	well, do you believe that the firmware caused	
04:	the controller to have too much voltage going	
05:	through it?	
06: A	. No.	
07: Q	. Okay. And did the firmware exacerbate the	
08:	consequences of too much voltage going	
09:	through the controller?	
10: A	. No.	
11: Q	. So I'm now I'm confused.	
12:	How was the firmware involved in	
13:	this at all.	
14: A	. So our understanding with the issue we saw	
15:	the ESD event would cause basically random	
16:	values to be assigned to certain memory	
17:	locations, that could be any value. The	
18:	firmware would detect those values and then	
19:	reset to a default state to correct those	
20:	out-of-range values, and the default state	
21:	was serial number zero, because by default,	
22:	they're not assigned a serial number until	
23:	they're assigned it.	